International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online)
Vol. 6, Issue 1, pp: (365-371), Month: April - September 2018, Available at: www.researchpublish.com

EFFECT OF INVENTORY MANAGEMENT ON FINANCIAL PERFORMANCE ON MANUFACTURING COMPANIES IN MOGADISHU, SOMALIA

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Abstract: **Inventory management is a very important function that determines the health of the supply chain as well as the impacts the financial health of the balance sheet and income statement. Every organization constantly strives to maintain optimum inventory to be able to meet its requirements and avoid over or under inventory that can impact the financial figures or worse draws the company into bankruptcy. The general objectives of this study were to investigate the effect of inventory management on financial performance of manufacturing companies in Mogadishu, Somalia. Also this study used a sample of five manufacturing companies, Anshur Factory, Afi Water Supply, Coco Cola, Mubarak Factory and Dalsan Water Supply. Specifically, this study was evaluated the effects of inventory planning management, inventory control management, inventory quality management and inventory recording management on financial performance in Mogadishu. Also this study used the theory of economic order quantity, Just in Time Model and Pareto (ABC) Model. The study adopted a descriptive study design in data collection. The target population of this study was 100 employees of finance and procurement departments of all manufacturing companies in Mogadishu. This study was used the purposive random sampling technique. The data collection procedure of this study is through hand picking. Primary data was collected by use of questionnaires which are administered through drop and pick method. Data screening was done to identify any missing data and it will be further test for reliability and normality. Data was analyzed using SPSS version 22. Descriptive statistics e.g standard deviations and inferential statistics such as Pearson's correlation, ANOVA and multiple regression analysis was used for further analysis. The findings of the study was indicated that inventory planning was statistically associated with financial performance ($p<0.05$), as well as the results indicated that Inventory Recording was statistically associated with financial performance ($p<0.05$). Similarly the result indicated that inventory controlling was statistically associated with financial performance ($p<0.05$), and finally the results indicated that inventory quality management was statistically associated with financial performance ($p<0.05$).The conclusions were based on the objectives of the study that inventory management drivers had a significant influence on financial performance of manufacturing companies. The results established that inventory management drivers were found to significantly and positively influence financial performance. The study recommends the adoption of the inventory management and financial performance of manufacturing companies in Mogadishu. The inventory management was recommended as a useful design for practicing manufacturing companies with respect to the implementation of best practice.**

Keywords: **Planning, Control, Record Keeping, Quality Management and Financial Performance.**

1. INTRODUCTION

Specific Objectives:

Specific objectives of the study include

i. To investigate the effect of inventory planning on financial performance of manufacturing companies in Mogadishu.

ii. To examine the effect of inventory control on financial performance of manufacturing companies in Mogadishu.

iii. To investigate the effect of inventory record keeping on the financial performance of manufacturing companies in Mogadishu.

iv. To determine the effect of inventory quality management on financial performance of the manufacturing companies in Mogadishu

2. LITERATURE REVIEW

Theoretical Framework:

The Theory of Economic Order Quantity:

The economic order quantity (EOQ) theory was proposed by (Haris, 2001) to determine the optimal inventory level. EOQ refers to an inventory level that can minimize both inventory holding cost and inventory ordering cost (Lwiki et al., 2013). The EOQ model is used to determine an optimal ordering size that will minimize the sum of ordering and carrying costs (Ziukov, 2015). This model was found on the assumption that demand equals annual total quantity ordered by the firm at any point in time (Milicevic, Davidovic & Stefanovic, 2010). The EOQ model considers a tradeoff between storage cost and ordering cost when making a decision on the quantity to use when replenishing inventory items. Ordering frequency is usually reduced by a larger amount of quantity ordered, hence reduced ordering cost but increases storage costs and requires a larger space for storage too (Schwarz, 2010).

Just in Time Model:

Just in Time (JIT) is a strategy that is meant to improve the financial performance of a business by reduction of excess inventory together with associated cost (Shin, Ennis & Spurlin, 2015). The JIT model is based on three crucial principles: waste elimination, continuous improvement in product and service quality and involvement of staff/workers in planning and implementation of the firm’s strategies (Obiri-Yeboah, Ackah & Makafui, 2015). JIT is a management concept that was invented to specifically help firms in waste avoidance/reduction. JIT encourages waste minimization as well as productivity enhancement

3. REVIEW OF VARIABLES

Inventory Control and financial Performance:

Inventory is a vital resource and maintaining it is necessary for tea processing firms. Inventory control system may be adopted for purposes of reducing storage costs and factory overall costs. The system provides the organizational structure and the operating policies for maintaining and controlling goods to be stocked (Jacobs, Berry, Whybark, & and Vollmann, 2011).According to their study raw materials ordering frequency is indentified as an important factor contributing to inventory cost. Frequent ordering in small quantity is considered as an important strategy for choosing inventory control system (Jacobs, Berry,Whybark, & and Vollmann, 2011).

Inventory control is one of the key management areas in organizations. This is because of the internal roles inventory control plays in the organizations such as facilitation of continuous production, smoothening of operations and enhancement of customer service (Singh, 2013

Inventory Planning and financial performance:

Inventory planning is about determining the optimum levels of inventory both for today and the future. Categorization of Inventory differs from organization to organization based on the business undertaking. General criteria used are nature of Inventory. An example is the manufacturing, sale or retail inventories, the purpose for which Inventory is being held in stock or function and the related usage in the supply chain. Others include consumables, all supplies in an undertaking which are classified as indirect and which do not form part of saleable product Proper classification of Integrated and its control improve the financial position of a business (Williams,2008).

Effects of Inventory Record keeping on Financial Performance:

Many organizations still rely on manual inventory systems, Opeyemi et al. (2013) points out that manual inventory system is characterized by a number of challenges. The first challenge is time consumption as the system is updated manually after daily business operations. The second problem is associated with communication. In manual system, the inventory records are taken manually hence hindering information flow between stores and related departments. Other challenges include difficult stock counting, difficulty in keeping track of daily inventory movements and inconsistency in ordering of materials. Because of the above challenges, many organizations are adopting computerized inventory system.

Effects of Inventory Quality Management on Financial Performance:

The scope of inventory Quality management also concerns the fine lines between Quality, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods and demand forecasting (Lau A., and Snell, 2006).

According to Lynch (2005), the main objective of inventory management is to minimize the total Quality of relevant costs to ensure profitable operations. Because of value attributed to inventory management, two cardinal decisions must be faced if the inventory management is; how much we buy at a time? When we buy (or manufacture)?

Research Design:

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Research design stands for advance planning of the methods to be adopted for collecting the relevant data and the techniques to be used in their analysis, keeping in view the objective of the research and the availability of staff, time and money (Kothari 2013). This study adopted a descriptive study design. Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group, studies concerned with specific predictions, with narration of facts and characteristics concerning individual, group or situation.

Data Processing and Analysis:

Data analysis takes place when all the data were collected and data sets prepared. Data sets can result when coding and data refinements take place (Pallant, 2007). Analysis is the disaggregation of data into the minutest detail so that the unit of analysis is input into the methods and procedures selected for data runs (Pallant, 2007). This study would make use of the Statistical Package for Social Sciences (SPSS version 22). This tool would help speed the data analysis and instantaneous results can be obtained immediately following program execution. These results then was used to draw inferences and conclusions based on the probability obtained from those packages and applications (Pallant, 2007).To analyse the data regression model was applied and statistical inference would be made from the output of this procedure.

Effect of Inventory Planning on Financial Performance in Manufacturing Companies in Mogadishu-Somalia:

The first objective of the study was to determine the Effect of inventory management on financial performance of manufacturing companies in Mogadishu- Somalia, the result further showed that 60% manufacturing companies have been agreed there are the appropriate steps that have been taken by the Inventory Management helps in inventory planning and scheduling in the company. Further analysis revealed a mean of 2.87, meaning that manufacturing companies the appropriate steps that have been taken by Inventory Management helps in inventory planning and scheduling in the company.

The mean index for responses for this section was 2.85 which indicates that majority of the respondents agreed that inventory planning was a major factor influences in financial performance. The findings are consistent with (Young, 2011) test reveals that there is a significant relationship between inventory planning and financial performance.

Effect of inventory Control on Financial Performance of Manufacturing Companies in Mogadishu-Somalia:

The second objective of this study was the effect of inventory Control on financial performance of manufacturing companies in Mogadishu-Somalia, Table 4.9 shows when the responses to the statement that in the manufacturing, whether the Inventory control is the activity which organizes the availability of items for the customers of the Company, it was found 44% agreed, further analysis revealed a mean of 2.92. Meaning that Inventory control is the activity which organizes the availability of items for the customers of the Company. Analysis of the responses to the statement in the manufacturing, the Inventory/stock control refers to the techniques used to ensure that stocks of raw materials in your Company. That 76% of the respondents agreed, further analysis revealed a mean of 3.03. Meaning the Inventory/stock control refers to the techniques used to ensure that stocks of raw materials in your Company.

Effect of Inventory Record on Financial Performance of Manufacturing Companies in Mogadishu-Somalia:

The third objective of this study was the effect of Inventory Record on Financial Performance of Manufacturing companies in Mogadishu-Somalia, Table 4.10 shows analysis of the responses to the statement in the Manufacturing, that Proper accounting and recording is a means of inventory management in used by company. That 60% of the respondents agreed, further analysis revealed a mean of 2.94. Meaning that Proper accounting and recording is a means of inventory management in used by company? The respondents were asked whether The Checking the Inventory records with the underlying invoices, and stock records, analysis of the responses to this statement established that 66% agreed, further analysis revealed a mean of 2.90. Meaning that in manufacturing companies there is Checking the Inventory records with the underlying invoices, and stock records.

Effect of inventory Quality Management on Financial Performance of Manufacturing Companies in Mogadishu-Somalia:

The third objective of this study was the effect of inventory Quality Management on financial performance of manufacturing companies in Mogadishu-Somalia; Table 4.11 shows analysis of the responses to the statement in the manufacturing, that Assessment and prosecution of inventory quality cases. That 73% of the respondents agreed, further analysis revealed a mean of 3.11. Meaning that Assessment and prosecution of inventory quality cases. The respondents were asked whether The Establishment of Inventory Quality policy, analysis of the responses to this statement established that 70% agreed, further analysis revealed a mean of 2.76. Meaning that in manufacturing companies there is Establishment of Inventory Quality policy.

4. MODEL SUMMARY

Table 4.1: Model Summary of Stepwise Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.795[a]	0.633	0.625	0.36114
a. Predictors: (Constant), Inventory Planning, Inventory Control, Inventory Recording, Inventory Quality Management				

In order to answer the research questions, a standard multiple regression analysis was conducted using financial performance as the dependent variable, and the four independence variables: Inventory Planning, Inventory Controlling, Inventory Recording and Inventory Quality Management as the predicting variables.

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variables due to change in the independent variables. From the findings in the above table the value of adjusted R squared is 0.625 and indicates that there was variation of 62.5% on financial performance of manufacturing companies in Mogadishu due to changes in Inventory Planning, Inventory Controlling, Inventory Recording and Inventory Quality Management at 95% confidence interval. This shows the significant that 62.5% of the variations in the financial performance of manufacturing companies in Mogadishu are accounted for by the variations in the independent variables and the remaining 37.5% are accounted by other factors contained in the standard error.

Analysis of Variance (ANOVA):

Table 4.2: ANOVA of Stepwise Multiple Regression

	Model	Sum of Squares	Df	Mean Square	F	Sig.
	Regression	1.559	4	0.390	83.903	.000[a]
	1	Residual	3.672	75	0.049	
	Total	5.230	79			
a. Predictors: (Constant), Inventory Planning, Inventory Controlling, Inventory Recording and Inventory Quality Management						
b. Dependent Variable: Financial performance						

From the ANOVA statistics shown in table, the processed data, which is the population parameters, had a significance level of 0.5% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value) is less than 5%. The F critical at 5% level of significance was 2.42. Since F calculated (83.903) is greater than the F critical (2.72), this shows that the overall model was significant and that Inventory Planning, Inventory Controlling, Inventory Recording and Inventory Quality Management significantly affect the financial performance of manufacturing companies in Mogadishu- Somalia.

5. CONCLUSIONS

The conclusions were based on the objectives of the study that inventory management drivers had a significant influence on financial performance of manufacturing companies. The results established that inventory management drivers were found to significantly and positively influence financial performance. When all the stated variables were tested in the regression model they were found to have a significant relationship between themselves and financial performance of manufacturing companies. Inventory planning was the driver which had the highest effect on financial performance of manufacturing companies followed by inventory controlling, inventory recording and inventory quality management. The findings of this study confirm that manufacturing companies in Mogadishu-Somalia employed inventory planning, inventory recording and inventory quality management either simultaneously or at the exclusion of others in order to be competitive and improve their performance.

6. RECOMMENDATIONS

It was found that management policies influenced inventory planning. It is recommended to the manufacture company's management to ensure that the manufacture has put in place policies and procedures to be adhered to during inventory management. The manufacture company management is also urged to ensure that there are standardized and written manuals with the policies regarding inventory management. From the findings and conclusion, the study further recommends that there is need for manufacturing companies in Mogadishu to increase inventory planning so as to increase their internal management as it was found that an increase in inventory planning positively affect the financial performance.

There is need for the manufacturing companies in Mogadishu to increase their inventory controlling as it was founded that inventory controlling positively affects the financial performance of manufacturing companies in Mogadishu.

There is need for the regulator to introduce inventory recording that will be applied across all the financial performance of manufacturing companies. This will go way further towards increased inventory recording in the sector and contributes towards better financial performance in the sector.

The study further recommends the need to strengthen this study via a longitudinal study and compare the performance of different categories of businesses as well. The implications from the findings point to a configuration approach on the implementation of inventory management by manufacturing companies.

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